

Patent Claims:

1. Process for laser beam welding with reduced formation of end craters, thereby characterized, that towards the seam end the focus of the laser beam is distanced from the surface to be welded.
2. Process according to Claim 1, thereby characterized,
that the welding speed is reduced towards the seam end, and/or
that at the seam end a local beam movement occurs extending sideways beyond the seam.
3. Process for laser beam welding with reduced formation of end craters, wherein the laser beam power is reduced at the seam end, thereby characterized,
that the welding speed is reduced towards the seam end, and/or
that a beam movement occurs projecting locally laterally beyond the seam, and/or
that towards the seam end the focus of the laser beam is distanced from the surface to be welded.
4. Process according to one of Claims 2 or 3, thereby characterized, that the local beam movement is in the shape of a spiral narrowing about the center of the seam end.
5. Process according to one of Claims 2 or 3, thereby characterized, that the local beam movement is in the shape of a circular movement or gyration superimposed transverse to the seam about the center of the seam end.

6. Process according to one of the preceding claims, thereby characterized, that the defocusing of the laser beam occurs along a linear progression.
7. Process according to one of the preceding claims, thereby characterized, that the laser welding is carried out with a laser scanner.
8. Process according to one of preceding claims, thereby characterized, that the terminal seam segment within which the power, speed or focus is varied, or in which the lateral beam movement occurs, has a length of 2 to 5 mm, preferably 3 mm.
9. Process according to Claim 8, thereby characterized, that within the seam segment the laser output is reduced from 2000 to 1500 Watt, preferably 1700 Watt, to 500 to 0 Watt, preferably 300 Watt.
10. Process according to Claim 8 or 9, thereby characterized, that the laser beam travels through the seam segment within 50 to 100 ms, preferably 70 ms.
11. Process according to one of preceding claims, thereby characterized, that the width of the lateral beam movement laterally to the weld seam is 1 to 5 mm, preferably 2 mm, to each side.